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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,413	07/19/2006	Kunihiro Mishima	SEY-06-1193	3130

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IP GROUP OF DLA PIPER LLP (US)  
ONE LIBERTY PLACE  
1650 MARKET ST, SUITE 4900  
PHILADELPHIA, PA 19103

EXAMINER
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DONDERO, WILLIAM E

ART UNIT	PAPER NUMBER
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3654

NOTIFICATION DATE	DELIVERY MODE
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02/09/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

pto.phil@dlapiper.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/586,413	<b>Applicant(s)</b> MISHIMA ET AL.	
	<b>Examiner</b> WILLIAM E. DONDERO	<b>Art Unit</b> 3654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,7,8,10,11,13-18 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2,4,5,7 and 8 is/are allowed.
- 6) ☒ Claim(s) 10,11,13-18 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                     |                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                         | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Claim Rejections - 35 USC § 103***

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nojiri et al. (US-5499776). Regarding Claim 11, Nojiri et al. disclose a fiber bundle traversing device, comprising a traverse guide 2 for guiding the fiber bundle F and a traverse mechanism 6,7,8 of the traverse guide, for traversing the fiber bundle by reciprocating the traverse guide in the direction of a bobbin rotating shaft by the traverse mechanism; wherein the traverse guide comprises, at least, an upper guide roll 2<sub>1</sub> of which the roll rotating shaft is arranged at a position twisted substantially at a right angle to the bobbin rotating shaft 3 and a final guide roll 2<sub>e</sub> of which roll rotating shaft is arranged substantially parallel to the bobbin rotating shaft, and the upper guide roll and the final guide roll are arranged, respectively, so that the roll rotating shaft direction of the guide roll and the yarn path direction entering the guide roll have a positional relation twisted substantially at a right angle (Figure 1A). Nojiri et al. does not expressly disclose specific values for the outer diameter of the final guide roll and the length of contact between the fiber bundle in the final guide roll.

However, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been

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obvious through routine experimentation and optimization, for one of ordinary skill in the art to have outer diameter of the final guide roll be between 22 to 30 mm and the fiber bundle contact the final guide roll for 15 mm or more to insure the bundle maintains its width as taught by Nojiri et al.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nojiri et al. (US-5499776) as applied to claim 11 above, and further in view of Nakai et al. (US-4989799). Nojiri et al. does not expressly disclose two or more guide rolls of which the roll rotating shaft is arranged substantially parallel to the bobbin rotating shaft, including the final roll; and wherein the total length of these rolls in contact with the fiber bundle is 25 mm or more.

However, Nakai et al. teaches a fiber bundle traversing device comprising two or more guide rolls 7,8 of which the roll rotating shaft is arranged substantially parallel to the bobbin rotating shaft 9, including the final roll 8 (Figures 1-9). It would have been obvious to one of ordinary skill in the art at the time of the invention to add another guide roll with a rotating shaft parallel to the bobbin rotating shaft to the device of Nojiri et al. as taught by Nakai et al. to ensure accurate guiding of the fiber bundle.

Further, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been obvious through routine experimentation and optimization, for one of ordinary skill in the

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art to have the fiber bundle contact the two parallel guide rolls for 25 mm or more to insure the bundle maintains its width as taught by Nojiri et al.

Claims 14-15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nojiri et al. (US-5499776) as applied to claim 11 above, and further in view of Rauchfuss, Jr. et al. (US-4212422). Regarding Claims 14-15, Nojiri et al. disclose the upper guide roll has a yarn path guide mechanism for guiding the fiber bundle, the yarn path guide mechanism comprising a guide roll 2<sub>1</sub>; and a supporting member 5 that supports the guide roll; and wherein a fiber bundle F is guided automatically in an original yarn path direction (Figure 1A). Nojiri et al. does not expressly disclose the yarn guide mechanism for guiding the fiber bundle deviating from the yarn path in the original yarn path direction; and the supporting member having a rotating shaft at a position twisted at a right angle to the rotating shaft of the guide roll; wherein the fiber bundle is guided automatically in the original yarn path direction by inclining the guide roll with respect to the yarn path by rotating around the rotating shaft of the supporting member in response to variation of the yarn path.

However, Rauchfuss, Jr. et al. teaches an elongate material guide mechanism (30,40,62,65) for guiding an elongate material deviating from a elongate material path in the original elongate material path direction; and a guide roll (30,40); and a supporting member (62) that supports the guide roll, the supporting member having a rotating shaft (65) at a position twisted at a right angle to the rotating shaft of the guide roll; wherein an elongate material is guided automatically in the original elongate material path

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direction by inclining the guide roll with respect to the elongate material path by rotating around the rotating shaft of the supporting member in response to variation of the elongate material path (Figures 1-4; and Column 5, Lines 19-30). Since both Nojiri et al. and Rauchfuss, Jr. et al. teach a guide for guiding elongate material, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the pivoting guide of Rauchfuss, Jr. et al. for the guide of Nojiri et al. to achieve the predictable result of guiding the fiber bundle along the original yarn path while prevent the edge of the fiber bundle from running against an object that would damage the edges as taught by Rauchfuss, Jr. et al.

Claims 10, 16-18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nojiri et al. (US-5499776) in view of Rauchfuss, Jr. et al. (US-4212422). Regarding Claim 21, Nojiri et al. disclose a fiber bundle traversing device, comprising a traverse guide 2 for guiding the fiber bundle F and a traverse mechanism 6,7,8 of the traverse guide, for traversing the fiber bundle by reciprocating the traverse guide in the direction of a bobbin rotating shaft by the traverse mechanism; wherein the traverse guide has a yarn path guide mechanism for guiding the traveling yarn comprising a guide roll 2<sub>1</sub>; and a supporting member 5 that supports the guide roll; and wherein a fiber bundle F is guided automatically in an original yarn path direction; and wherein the traverse guide comprises, at least, an upper guide roll 2<sub>1</sub> of which the roll rotating shaft is arranged at a position twisted substantially at a right angle to the bobbin rotating shaft 3 and a final guide roll 2<sub>e</sub> of which roll rotating shaft is arranged

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substantially parallel to the bobbin rotating shaft, and the yarn guide is arranged on the upper guide roll (Figure 1A). Nojiri et al. does not expressly disclose the supporting member having a rotating shaft at a position twisted at a right angle to the rotating shaft of the guide roll; wherein the fiber bundle is guided automatically in the original yarn path direction by inclining the guide roll with respect to the yarn path by rotating around the rotating shaft of the supporting member in response to variation of the yarn path for guiding the fiber bundle deviating from the yarn path in the original yarn path direction.

However, Rauchfuss, Jr. et al. teaches an elongate material guide mechanism (30,40,62,65) for guiding an elongate material deviating from a elongate material path in the original elongate material path direction; and a guide roll (30,40); and a supporting member (62) that supports the guide roll, the supporting member having a rotating shaft (65) at a position twisted at a right angle to the rotating shaft of the guide roll; wherein an elongate material is guided automatically in the original elongate material path direction by inclining the guide roll with respect to the elongate material path by rotating around the rotating shaft of the supporting member in response to variation of the elongate material path (Figures 1-4; and Column 5, Lines 19-30). Since both Nojiri et al. and Rauchfuss, Jr. et al. teach a guide for guiding elongate material, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the pivoting guide of Rauchfuss, Jr. et al. for the guide of Nojiri et al. to achieve the predictable result of guiding the fiber bundle along the original yarn path while prevent the edge of the fiber bundle from running against an object that would damage the edges as taught by Rauchfuss, Jr. et al.

Regarding Claim 10, Nojiri et al. in view of Rauchfuss, Jr. et al. teaches the roll rotating shaft of the upper guide roll is arranged on the upstream shaft of the supporting member (Figure 1A).

However, one of ordinary skill in the art at the time of the invention would recognize moving the roll rotating shaft to the downstream side of the shaft of the supporting member would maintain the positioning allowing for the tension effects to still cause the guide to rotate in response the yarn moving off the original path.

Regarding Claim 16, Nojiri et al. disclose a fiber bundle winding device comprising the fiber bundle traversing device of claim 21 as advanced above.

Regarding Claim 17, Nojiri et al. disclose a manufacturing apparatus, comprising the fiber bundle winding device of claim 16 as advanced above.

Regarding Claim 18, Nojiri et al. disclose a method of manufacturing the fiber bundle package of claim 17 as advanced above comprising a method of manufacturing the fiber bundle package comprising supplying a fiber bundle F to the apparatus (Figure 1A).

***Allowable Subject Matter***

Claims 1-2, 4-5, and 7-8 are allowed.



***Response to Arguments***

With respect to Applicant's arguments starting on page 11, line 4 to page 12, line 12, Applicant argues Nojiri et al. does not disclose or suggest the structure of the fiber bundle traversing device. Applicant's arguments have been fully considered but they are not persuasive. As advanced in the rejection above, Nojiri et al. discloses all of the structure features of the fiber bundle traversing device except for the outer diameter of the guide roll and the length of contact between the guide roll and the fiber bundle. Absent any objective evidence of unexpected results, Applicant's arguments do not overcome the fact that these dimensions could be determined by routine optimization and experimentation.

With respect to Applicant's arguments starting on page 12, line 13 to page 12, line 17, Applicant argues Nakai et al. does not overcome the deficiencies of Nojiri et al. As advanced above, Nojiri et al. does not have any deficiencies; and therefore the rejection of Claim 13 is maintained.

With respect to Applicant's arguments starting on page 12, line 18 to page 12, line 23, Applicant argues Rauchfuss, Jr. et al. does not overcome the deficiencies of Nojiri et al. As advanced above, Nojiri et al. does not have any deficiencies; and therefore the rejection of Claims 14-15 is maintained.

With respect to Applicant's arguments starting on page 14, line 10 to page 14, line 32, Applicant argues Rauchfuss Jr., et al. disclose two guide rolls instead of a single guide roll and the rotating shaft of the guide roll of Rauchfuss Jr., et al. is on the upstream rather than downstream side of the shaft of the supporting member. Applicant's arguments have been fully considered but they are not persuasive. Regarding the two guide rolls instead of a single guide roll, Rauchfuss is just used to teach the supporting member with a rotating shaft at a right angle to the rotating shaft of a guide roll that is inclined to cause an elongate material to move from a deviated path to an original path. Regarding the location of the rotating shaft of the support member to the rotating shaft of the guide, this argument is not commensurate with the scope of Claim 21, as claim 21 does not have this limitation. The limitation appears in Claim 10, which depends from Claim 21, but as the rejection of Claim 10, above, states, it would have been obvious to one of ordinary skill in the art at the time of the invention to change the positioning of the respective rotating shafts to achieve better tension characteristics.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM E. DONDERO whose telephone number is (571)272-5590. The examiner can normally be reached on M - F 7 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Q. Nguyen can be reached on 571-272-6952. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John Q. Nguyen/  
Supervisory Patent Examiner, Art Unit 3654

/W. E. D./  
Examiner, Art Unit 3654